

Work Order ID 136410

Wednesday, September 02, 2015 3:17:13 PM

646.3716

B136410

136410

REV. A

RUSH

Page 1

Item ID: 646.3716

Revision ID:

Item Name: Gauge Bracket

Start Date: 9/4/2015 Start Qty: 6.00

Required Date: 9/4/2015 Req'd Qty: 6.00

Reference:

Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan: ML5

Date: SEP 03 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

646.3700

A

110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

GRAIN ALONG 2.41"

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

0.00

(8)

09/15/15

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

(8)

09/15/15



DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Misidentified ☐	Past Due ☐								

Work Order ID 136410

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136410

Page 3

Item ID: 646.3716 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Gauge Bracket
 Start Date: 9/4/2015 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 9/4/2015 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160									
Outsource4	Memo	18.00							
Outsource process - Anodize	Issue P/O to ATG : <u>29816</u>								
	1- Black Anodize as per Dwg 646.3700								
	2- PRIME AS PER DWG, SEE NOTE #2								
	Certification of Conformity is required								
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: <u>ack 105</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								

received 8 x 8015-09-25

8 (8) 15-09-25 PD

8 AS 27 9-89
 SEP 28 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Work Order ID 136410

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136410

Page 4

Item ID: 646.3716

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Gauge Bracket

Stop ***NS2***

Start Date: 9/4/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 9/4/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.01

Quality Control

MLJ

SEP 28 2015

MLJ

SEP 28 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Picklist Print

Wednesday, September 02, 2015 3:17:16 PM

Page 1

Work Order ID: 136410

136410

Parent Item: 646.3716

646.3716

Parent Item Name: Gauge Bracket

Start Date: 9/4/2015

Required Date: 9/4/2015

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 12.10.22 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080		Purchased	No			110	sf	180.5000	0.0306	0.193263			

M6061T6S 080

6061-T6 .080 Sheet

02/15

Location

Loc Qty

Loc Code

MAT020

180.5

m132099

36.5

m132772

144

.2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Scrap ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Use-as-is ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Suspected Unapproved ☐ Large Fab ☐ Composite ☐ Supplier ☐		AGAINST DEPARTMENT/PROCESS					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

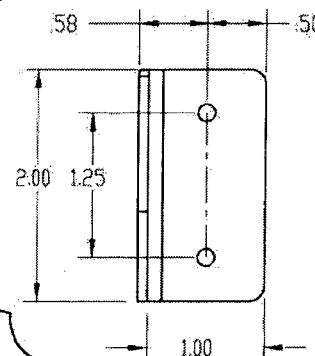
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03702				SHEET 1 OF 2	
	DWG NO. 646.3700	REV: A	PREPARED BY B. PETERS	DATE: 11/15/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: SHEETMETAL					
APPROVED BY: ENGR. <i>[Signature]</i>		MFG. <i>[Signature]</i>	QC <i>[Signature]</i>	EFFECT: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: ADDED ALTERNATE MATERIAL AND REVISED REFERENCE DIMENSIONS				EOR: D-12-010

SHEET 1, ZONE A2 IS:

IS

⚠ PRIMARY MATERIAL: ALUMINUM 6061-T6 PER AMS-QQ-A-250/11
ALTERNATE MATERIAL: SS 17-4 PH PER AMS 5604

IS



SHEET 7, ZONE B1 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

136410-MLJ

15-09-03

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ RFMS ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BDM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

DQA: _____ Date: _____

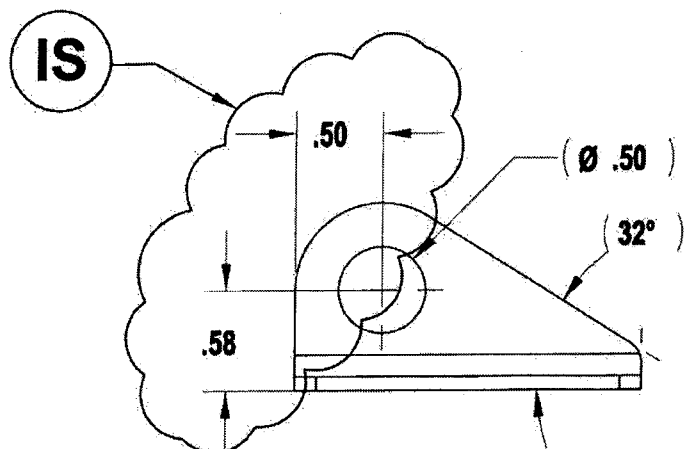


WORK ORDER NON-CONFORMANCE / UPDATE

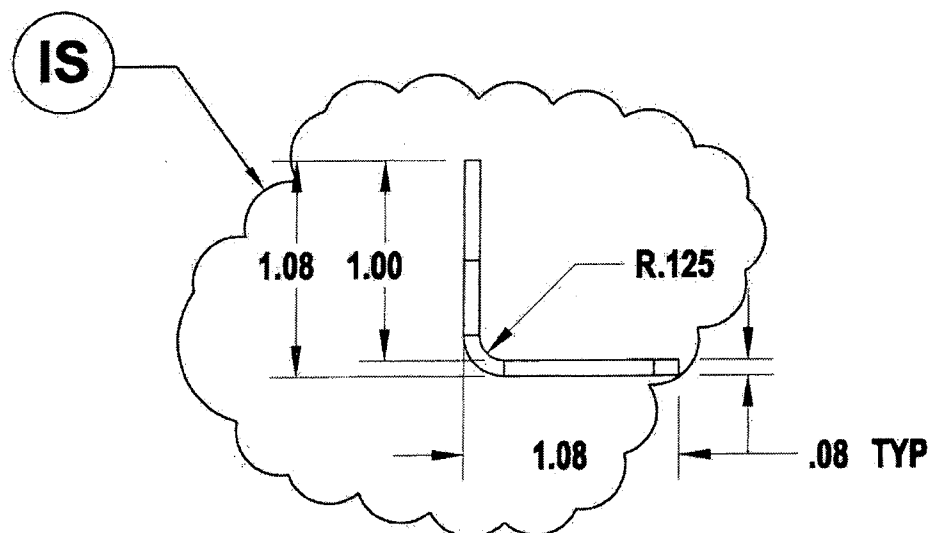
QA Closed: _____ Date: _____

Work Order update only ☐

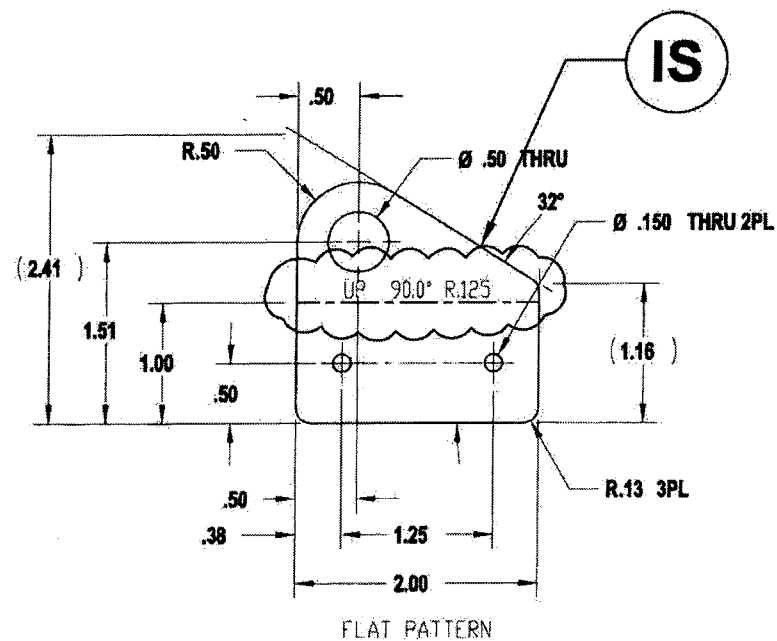
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					



SHEET 7, ZONE C4 IS:



SHEET 7, ZONE D1 IS:



SHEET 7, ZONE B7 IS:

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
-----	----	-------------	-----	-------------	------------------------

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

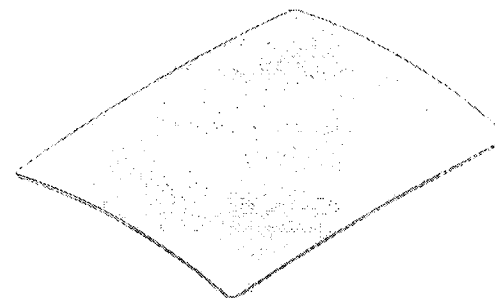
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

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REV.	DESCRIPTION	DATE	APPROVED
A	UNINCORPORATED ECN(S)	01/03/09	TEC

NOTES:

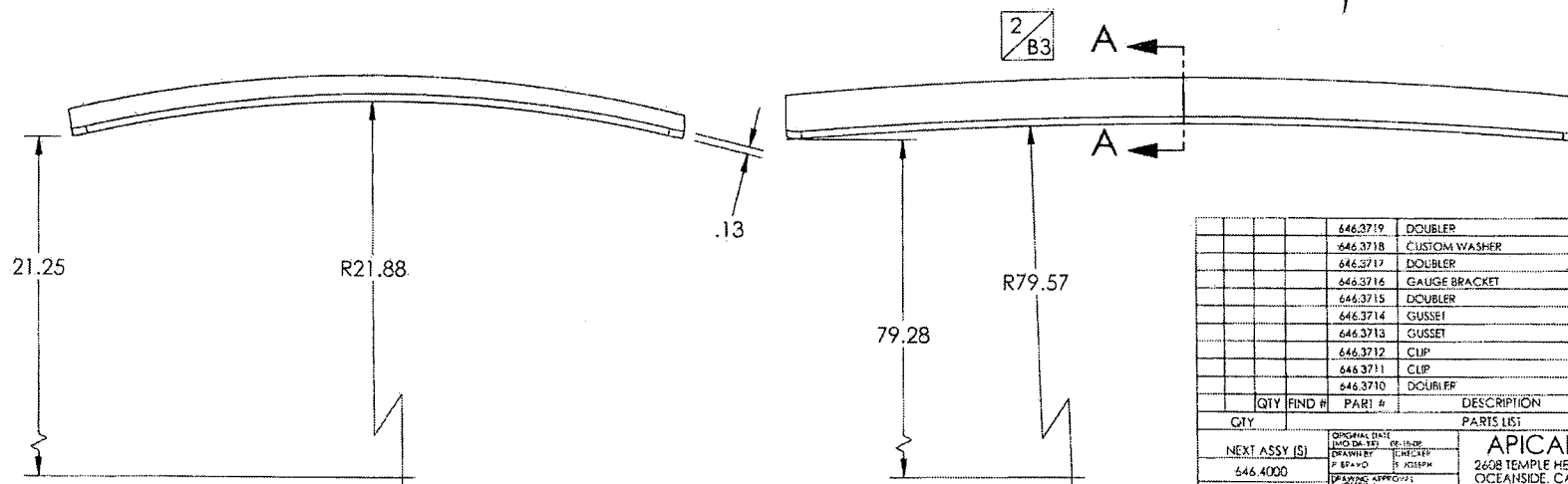
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- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2. COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: 17-4 PH AMS 5604. CONDITION H900
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
5. DEBURR AND BREAK ALL SHARP EDGES
6. IDENTIFY IAW MPP-120



646.3710

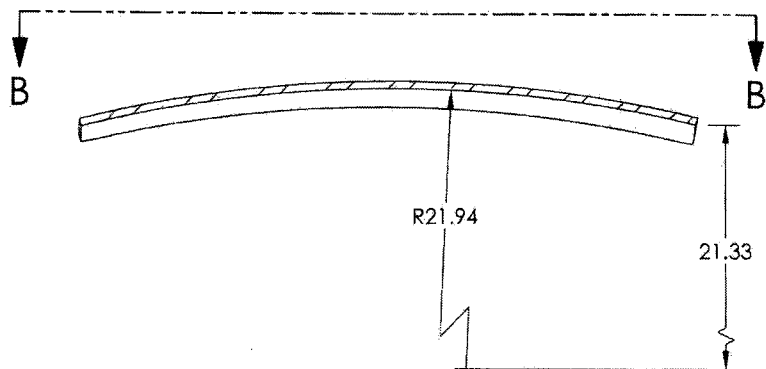
UNINCORPORATED ECN(s)

03702



QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
		646.3719	DOUBLER	△	△
		646.3718	CUSTOM WASHER	△	△
		646.3717	DOUBLER	△	△
		646.3716	GAUGE BRACKET	△	△
		646.3715	DOUBLER	△	△
		646.3714	GUSSET	△	△
		646.3713	GUSSET	△	△
		646.3712	CLIP	△	△
		646.3711	CLIP	△	△
		646.3710	DOUBLER	△	△
PARTS LIST			APICAL INDUSTRIES		
2608 TEMPLE HEIGHTS DR.			OCEANSIDE, CA. 92056-3512 (760)724-5300		
SHEETMETAL			646.3700		
SCALE: NONE			SHEET 1 OF 9		

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SECTION A-A



21.33

R21.94

R395.138

R.13 4PL

13.51

SECTION B-B

10.49

10.54

ORIGINAL DATE
INAC-DA 181 08-18-08
DRAWN BY: J. JOSEPH
P. SPAYO
DRAWING APPROVAL
J. JOSEPH
08-18-08
COUNCIL/PLT 110

UNITS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

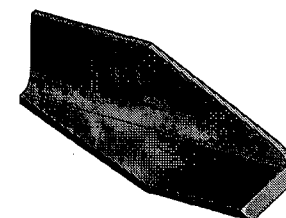
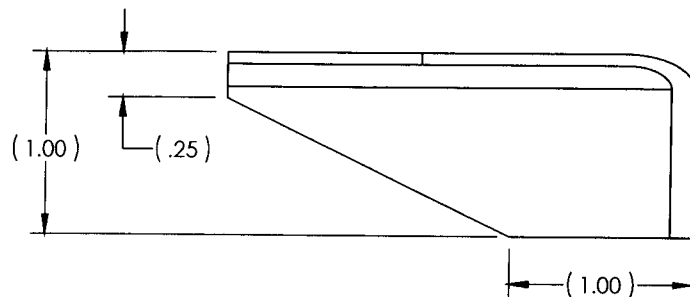
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEETMETAL

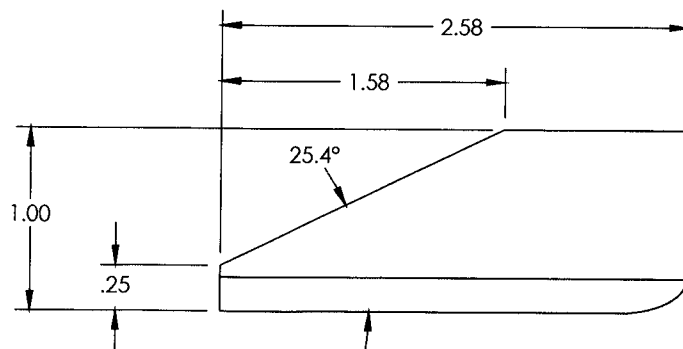
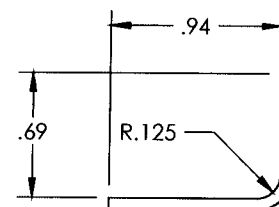
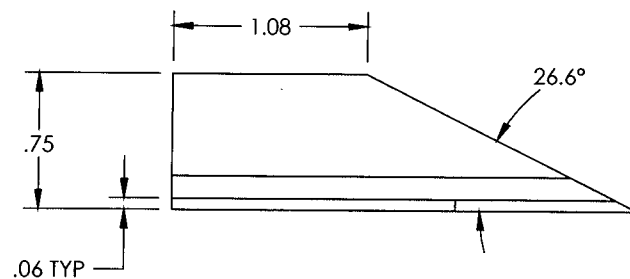
SHEET	DATE CODE	QTY	NO.	REV
B	07/16/06	646.3700		A
SCALE: NONE				SHEET 2 OF 9

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



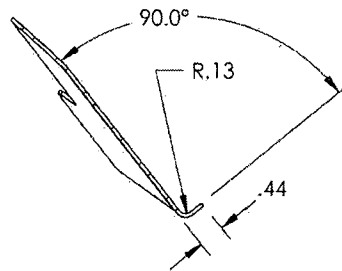
646.3711 SHOWN
646.3712 OPPOSITE



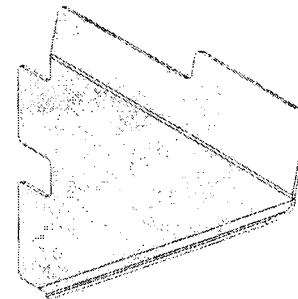
NEXT ASSY (S)	ORIGINAL DATE (DA-MO-YR)	06-18-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
	DRAWN BY	ICRECHER		
	P. BRAVO	S. JOSEPH	SHEETMETAL	
	DRAWING APPROVAL			
	S. JOSEPH		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°	
	CONTRACT NO.			
	SHEET	B	CAGE CODE	07MZ6
	DWG. NO.	646.3700		REV. A
	SCALE	NONE		SHEET 3 OF 9

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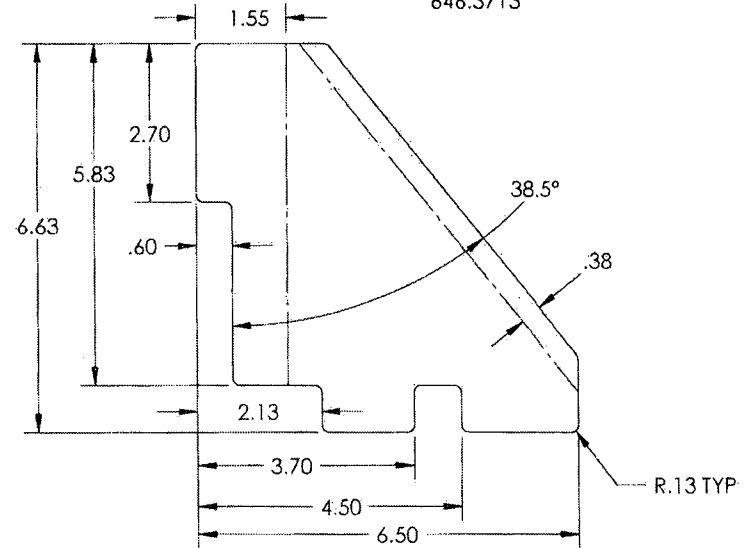
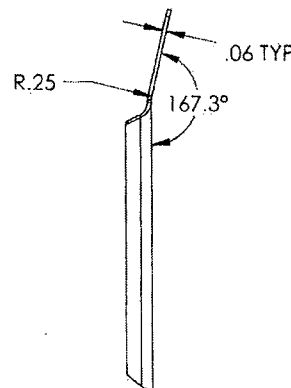
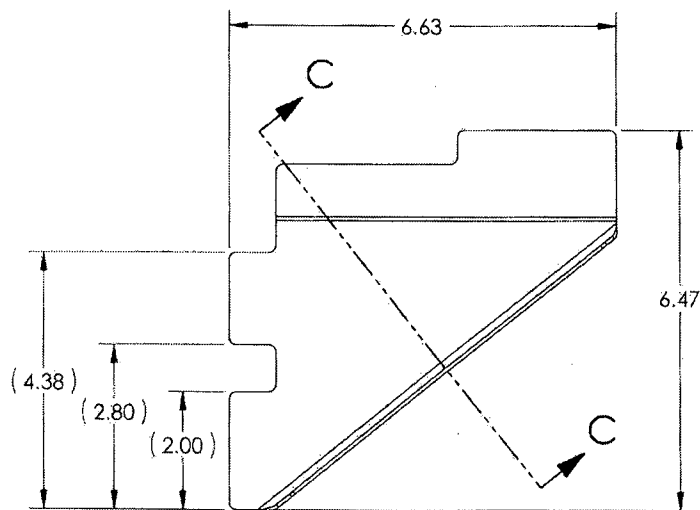
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



SECTION C-C



646.3713

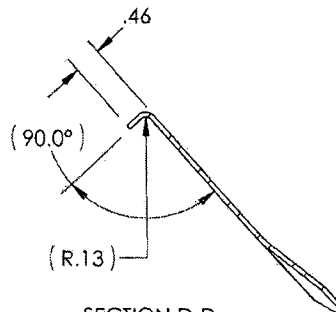
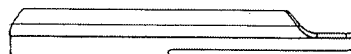


FLAT PATTERN

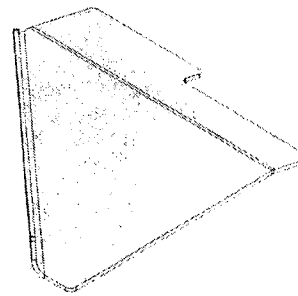
NEXT ASSY (S)	ORIGINAL DATE (MM/DD/YY)	08-18-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 SHEETMETAL	
	DESIGNER	S. JOHNS		
	DRAWN BY	S. JOHNS		
	CHECKED BY	S. JOHNS		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°			SEE EXPLANATION B 07/07/08	REV A
			SCALE: NONE	SHEET 4 OF 9

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

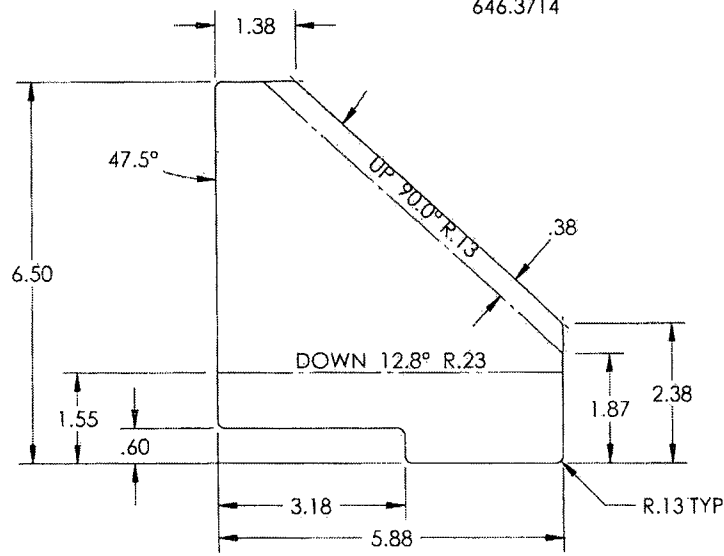
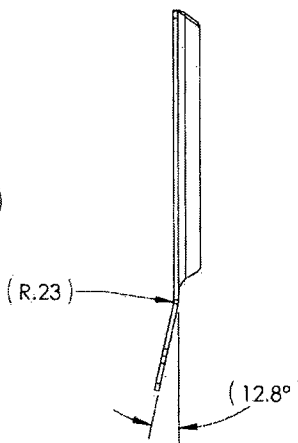
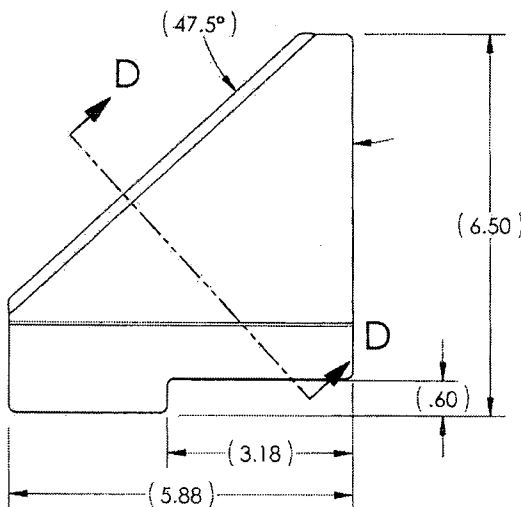
REV	DESCRIPTION	DATE	APPROVED



SECTION D-D



646.3714

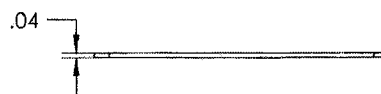
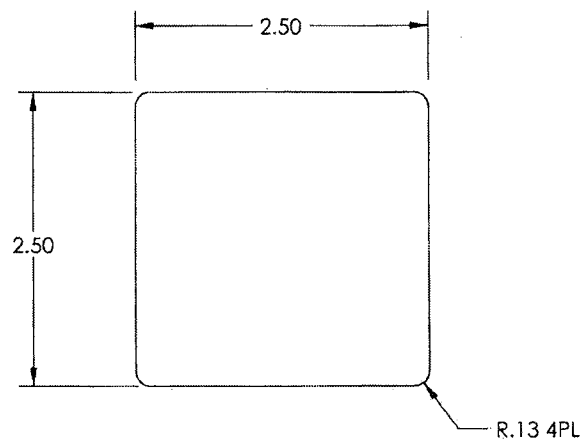


FLAT PATTERN

ORIGINAL DATE: 08-20-08 DESIGNED BY: J. JOSEPH P. BRAY DRAWING APPROVAL: S. JOSEPH CHECKED BY: J. JOSEPH	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE .01 FRACTIONS ARE 1/16 ANGLES ± .5°	SHEETMETAL REF: CAGE CODE 646.3700 B 07ME6 SCALE: NONE
SHEET 5 OF 9	REV: A

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

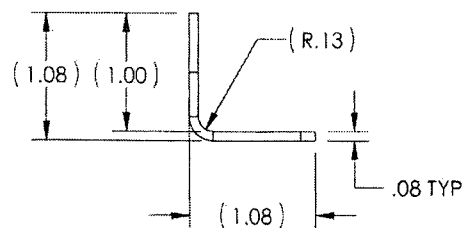
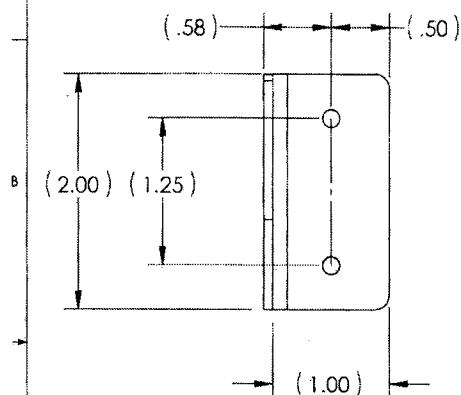


646.3715

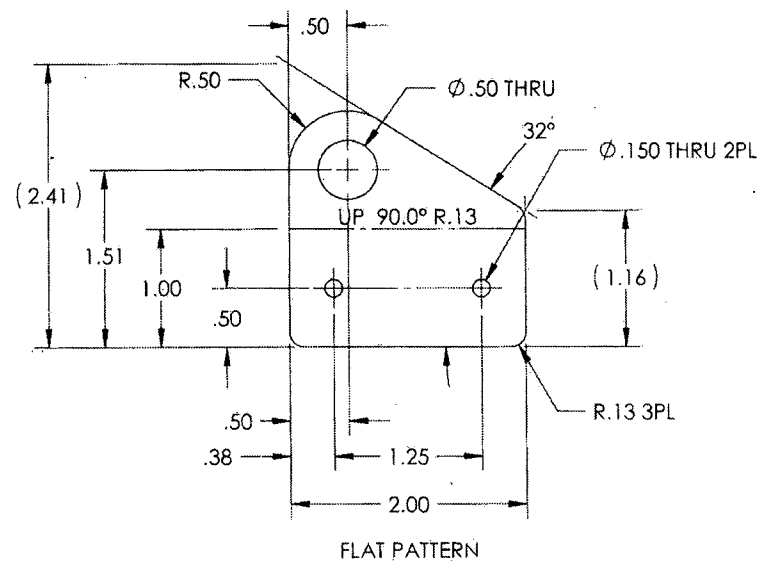
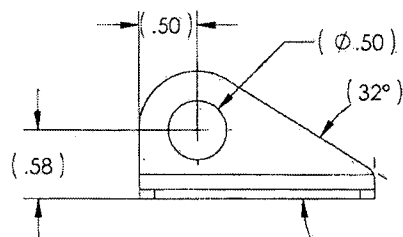
NEXT ASSY (S)		ORIGINAL DATE 08-18-03	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY	RECHECK	08-18-03		
P. BRAYO	S. JOSEPH			
DRAWING APPROVAL				
DESIGN			SHEETMETAL	
CONTRACT NO.				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONS ARE SPACE DIMENSIONS ARE ANGLES 3°		STF	CAGE CODE	QTY. NO.
		B	07M76	646.3700
		SCALE: NONE		SHEET 4 OF 2

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES AND REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED

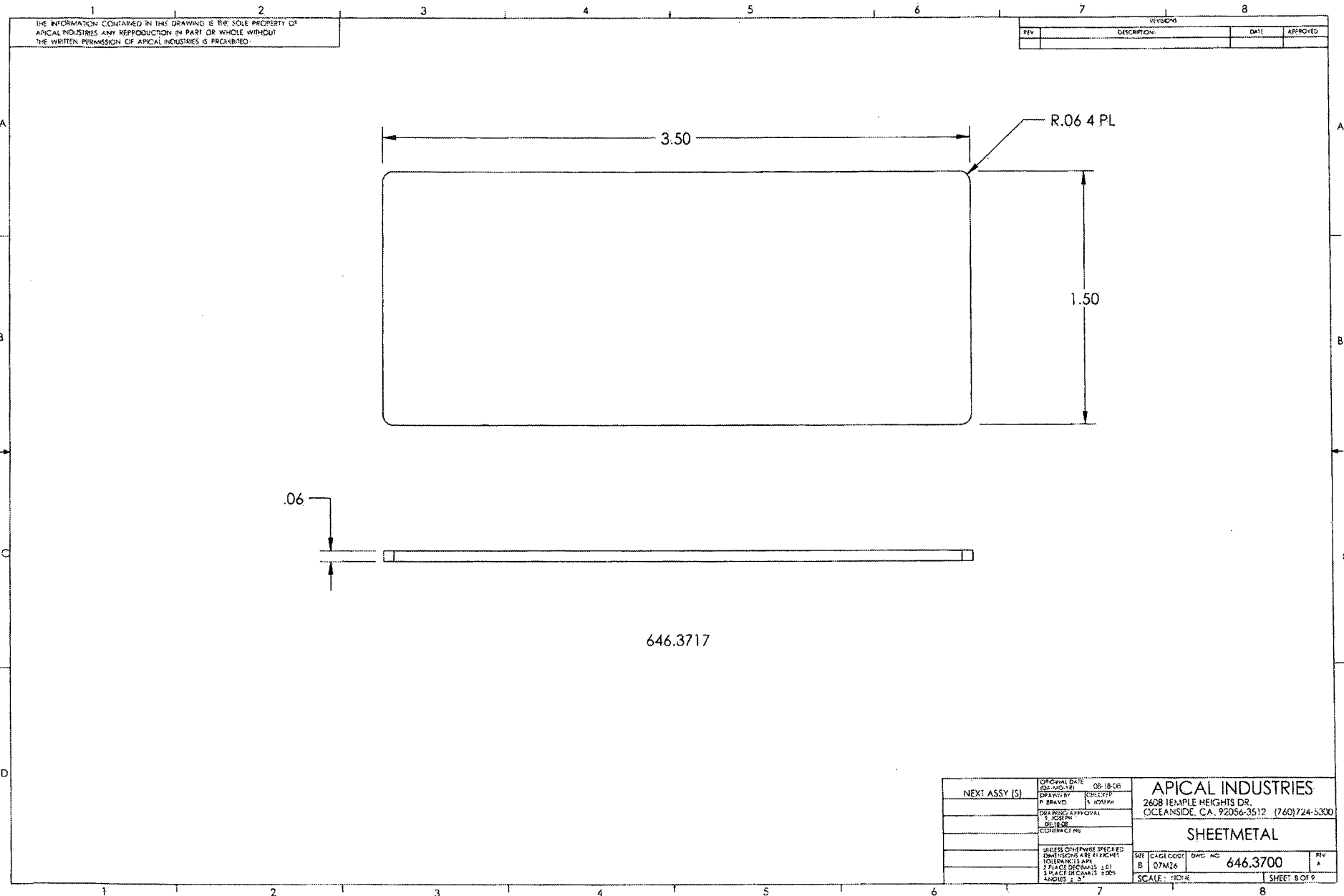
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



646.3716

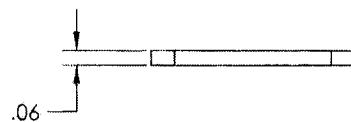
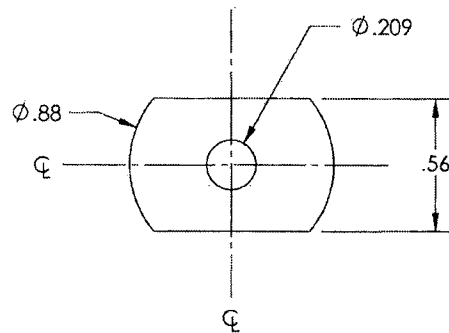


NEXT ASSY IS	ORIGINAL DATE	08-18-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
	DESIGNED BY	S. JOHNSON		
DRAWING APPROVAL	BY		SHEETMETAL	
	DATE	08-18-08		
CONTRACT NO.	UNLESS OTHERWISE SPECIFIED		TOL (EXCEPTED)	DWG NO
	FINISHES ARE			
	1 PLACE DECIMALS 1/16"		SCALE	SHEET 7 OF 9
	2 PLACE DECIMALS 1/32"			
	3 PLACE DECIMALS 1/64"			
	4 PLACE DECIMALS 1/128"			
	5 PLACE DECIMALS 1/256"			
	6 PLACE DECIMALS 1/512"			
	7 PLACE DECIMALS 1/1024"			
	8 PLACE DECIMALS 1/2048"			
	9 PLACE DECIMALS 1/4096"			
	10 PLACE DECIMALS 1/8192"			
	11 PLACE DECIMALS 1/16384"			
	12 PLACE DECIMALS 1/32768"			
	13 PLACE DECIMALS 1/65536"			
	14 PLACE DECIMALS 1/131072"			
	15 PLACE DECIMALS 1/262144"			
	16 PLACE DECIMALS 1/524288"			
	17 PLACE DECIMALS 1/1048576"			
	18 PLACE DECIMALS 1/2097152"			
	19 PLACE DECIMALS 1/4194304"			
	20 PLACE DECIMALS 1/8388608"			
	21 PLACE DECIMALS 1/16777216"			
	22 PLACE DECIMALS 1/33554432"			
	23 PLACE DECIMALS 1/67108864"			
	24 PLACE DECIMALS 1/134217728"			
	25 PLACE DECIMALS 1/268435456"			
	26 PLACE DECIMALS 1/536870912"			
	27 PLACE DECIMALS 1/1073741824"			
	28 PLACE DECIMALS 1/2147483648"			
	29 PLACE DECIMALS 1/4294967296"			
	30 PLACE DECIMALS 1/8589934592"			
	31 PLACE DECIMALS 1/17179869184"			
	32 PLACE DECIMALS 1/34359738368"			
	33 PLACE DECIMALS 1/68719476736"			
	34 PLACE DECIMALS 1/137438953472"			
	35 PLACE DECIMALS 1/274877906944"			
	36 PLACE DECIMALS 1/549755813888"			
	37 PLACE DECIMALS 1/1099511627776"			
	38 PLACE DECIMALS 1/2199023255552"			
	39 PLACE DECIMALS 1/4398046511104"			
	40 PLACE DECIMALS 1/8796093022208"			
	41 PLACE DECIMALS 1/17592186044416"			
	42 PLACE DECIMALS 1/35184372088832"			
	43 PLACE DECIMALS 1/70368744177664"			
	44 PLACE DECIMALS 1/140737488355328"			
	45 PLACE DECIMALS 1/281474976710656"			
	46 PLACE DECIMALS 1/562949953421312"			
	47 PLACE DECIMALS 1/1125899906842624"			
	48 PLACE DECIMALS 1/2251799813685248"			
	49 PLACE DECIMALS 1/4503599627370496"			
	50 PLACE DECIMALS 1/9007199254740992"			
	51 PLACE DECIMALS 1/18014398509481984"			
	52 PLACE DECIMALS 1/36028797018963968"			
	53 PLACE DECIMALS 1/72057594037927936"			
	54 PLACE DECIMALS 1/144115188075855872"			
	55 PLACE DECIMALS 1/288230376151711744"			
	56 PLACE DECIMALS 1/576460752303423488"			
	57 PLACE DECIMALS 1/1152921504606846976"			
	58 PLACE DECIMALS 1/2305843009213693952"			
	59 PLACE DECIMALS 1/4611686018427387904"			
	60 PLACE DECIMALS 1/9223372036854775808"			
	61 PLACE DECIMALS 1/18446744073709551616"			
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	63 PLACE DECIMALS 1/73786976294838206464"			
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	65 PLACE DECIMALS 1/295147905179352825856"			
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	70 PLACE DECIMALS 1/9444732965739290427392"			
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	84 PLACE DECIMALS 1/154742504910672534362390528"			
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	91 PLACE DECIMALS 1/19807040628566084398385987584"			
	92 PLACE DECIMALS 1/39614081257132168796771975168"			
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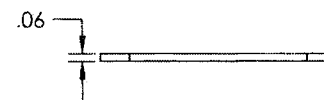
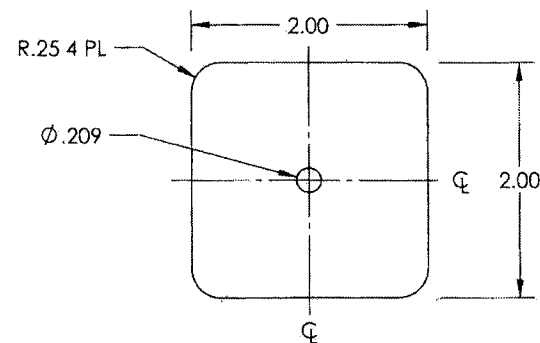


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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3718



646.3719

NEXT ASSY (S)		ORIGINAL DATE 06-10-09	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 SHEETMETAL
DESIGNED BY	INCH/FEET	DATE	
DRAWN BY	DATE	DATE	
CHECKED BY	DATE	DATE	
UNLESS OTHERWISE SPECIFIED		SHEET CLASS CODE	DWG. NO.
DIMENSIONS ARE IN INCHES		B 07M26	646.3700
TOLERANCES ARE:		SCALE: NONE	SHEET 5 OF 5
3 PLACE DECIMAL: ± .01			
ANGLES: ± 5°			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO29816**

Purchase Order Date 9/17/2015

PO Print Date 9/22/2015

Page Number 2 of 3

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Ship To Contact

Terms

Net 30

Ship To Phone

Currency

CAD

Ship Via:

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Ship Acct:

Line Total: \$72.00

4 136410 646.3716 GAUGE 9/25/2015

BRACKET REV. A

Yes
9/25/2015

8.00

\$10.29 \$82.29

2015-09-25

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total: \$82.29

5 136113 646.3812 GUSSET 9/25/2015

BRACKET REV. N/C

Yes
9/25/2015

20.00

\$10.29 \$205.71

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N

Line Total: \$205.71

Note:

9/22/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63931

Date: 24-Sep-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 ea	Part: D5271-1 ✓ BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 Job: 20150719	Rev:	PO: PO29816
1 ea	Part: D5271-3 ✓ LH AFT FITTING BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 Job: 20150720	Rev: A	Line: PO: PO29816
15 ea	Part: 646.3716 ✓ GAUGE BRACKET HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150721	Rev: A	Line: PO: PO29816
20 ea	Part: 646.3812 ✓ GUSSET BRACKET HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150722	Rev:	Line: PO: PO29816
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			



A.T.G. Industries Inc.
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PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

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Pack List

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DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via
Quantity	Description	
	DATE: <u>24/9/15</u>	
	CERTIFIED SIGNATURE: <u>[Signature]</u>	
	RECEIVER SIGNATURE: <u>SP15-09-25</u>	